No. 87-110

Supreme Court, U.S.
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CLERK

In The Supreme Court of the United States

October Term, 1987

MOR-FLO INDUSTRIES, INC., and AMERICAN APPLIANCE MFG. CORP.,
Petitioners,

v.

STATE INDUSTRIES, INC.,
Respondent.

PETITION FOR WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

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QUESTION PRESENTED

Whether public policy considerations underlying the requirement that the subject matter of a U.S. patent not be "on sale" more than a year prior to application for patent (Title 35 U.S. Code §102(b)), requires this Court to resolve inconsistent holdings of law by the Court of Appeals for the Federal Circuit that "reduction to practice" *is* a prerequisite for purposes of the "on sale" preclusion as held by that Court in the instant case, or *is not* a prerequisite as recently held by that Court in *UMC Corporation v. United States*, 816 F.2d 647 (Fed. Cir. 1987)?

PARTIES TO THE PROCEEDINGS BELOW

The parties to the proceedings below are:

1. Defendant-Appellant (Petitioner), Mor-Flo Industries, Inc. and its wholly-owned subsidiary American Appliance Mfg. Corp. (collectively referred to as "Mor-Flo"); and

2. Plaintiff-Appellee (Respondent), State Industries, Inc.

STATEMENT PURSUANT TO RULE 28.1

Mor-Flo Industries, Inc. is a publicly held corporation with several wholly-owned subisidiaries.

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PETITION FOR WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

OPINIONS BELOW

The unpublished opinion of the Court of Appeals for the Federal Circuit is reprinted in the attached appendix. [A- 1-6].

The memorandum decision of the United States District Court for the Eastern District of Tennessee, Northeastern Division (Hull, T) is reported at 639 F.Supp. 937, and it is reprinted in the attached appendix. [A-10-35].

JURISDICTION

The Respondent brought suit charging infringement of its U.S. Patent No. 4,447,377 in the Eastern District of Tennessee pursuant to Title 28 U.S.C. §§1338 and 1400.

On May 29, 1986, the District Court found the patent in suit not invalid and infringed.

Pursuant to 28 U.S.C. §1338(a)(1), Petitioner appealed to the Federal Circuit Court of Appeals. On March 3, 1987, The Federal Circuit affirmed the judgment of the District Court. A petition for rehearing and a suggestion for rehearing *en banc* were denied respectively on April 1, 1987 [A-7] and May 13, 1987 [A-8].

The jurisdiction of this Court is invoked under 28 U.S.C. §1254(1).

STATUTES AND RULES INVOLVED

United States Constitution, Article I, Section 8, Clause 8:

> The Congress shall have Power. . .
>
> To Promote the Progress of Science and useful arts, by securing for limited Times to . . . Inventors, the exclusive Right to their discoveries . . .

35 U.S.C §102, Conditions for patentability; novelty and loss of right to patent:

> A person shall be entitled to a patent unless –
> (b) the invention was . . . on sale in this country, more than one year prior to the date of the application for patent in the United States, ...

Title 28 U.S.C. §1295, Jurisdiction for the United States Court of Appeals for the Federal Circuit

> (a) The United States Court of Appeals for the Federal Circuit shall have exclusive jurisdiction –
> (1) of an appeal from a final decision of a district court of the United States, . . . if the jurisdiction of that court was based, in whole or in part, on section 1338 of this title. . . .

STATEMENT OF THE CASE

Pursuant to Title 28 U.S.C. §§1338 and 1400, Respondent, State Industries, Inc. ("State") brought suit against Petitioner, Mor-Flo Industries, Inc. ("Mor-Flo") (and its wholly owned subsidiary, American Appliance Mfg. Corp.) for infringement of Respondent's U.S. Patent No. 4,447,377 ("the '377 patent").

The U.S. District Court for the Eastern District of Tennessee held the '377 patent valid. The U.S. Court of Appeals for the Federal Circuit affirmed the decision of the District Court sustaining the determination of the District Court that the claimed invention of the '377 patent had not been "on sale" for more than a year prior to the application for patent within the meaning of Title 35 U.S.C. Section 102(b).

The '377 patent discloses and claims a method for insulating the exterior of a water heater tank with a rigid wall of foam insulation, which is foamed in place in a plastic envelope within the space between the water tank and the outer jacket of the heater. Prior to the critical date, December 10, 1978, State offered for sale foam insulated gas water heaters by the issuance of price sheets for its "Censible" and "Superlife" brand foam insulated heaters. [A-36-37] All foamed gas water heaters of State were foamed pursuant to the patented method. [A-38] In fact, the price sheets emphasized "State's EXCLUSIVE FOAM INSULATION!"

The District Court held that the "on sale" defense required proof, citing *D.L. Auld Co. v. Chroma Graphics Corp.*, 714 F.2d 1444 (Fed. Cir. 1983), that State's "patented process had been successfully reduced to practice" more than one year prior to the filing of the patent application. [A-12]. The Federal Circuit affirmed this application of law and stated that Mor-Flo did not prove that the patented method was reduced to practice prior to the critical date. [A-6].

REASONS WHY THE WRIT SHOULD BE GRANTED

This is not a case where two circuit courts of appeal have reached different conclusions on an important issue of the patent laws and issued decisions thereon in conflict with each other. Rather this is a case where the one circuit court of appeals entrusted with all appeals in patent matters has itself reached conflicting decisions on an important issue of patent law.

The Federal Circuit Court of Appeals was created to eliminate nonuniformity and nonreliability in the patent law. See, S. Rep. No. 275, 97 Cong. 1st Sess. 3-6, *reprinted in* 1982 U.S. Code Cong. & Adm. News 11, 13-16. The decision below, however, is in direct conflict with the Federal Circuit's decision in *UMC Electronics Company v. United States*, 816 F.2d 647 (Fed. Cir. 1987), a decision rendered only two weeks after the petition for rehearing in this case was denied. These decisions are in direct conflict and hence the public and the patent bar cannot be assured as to which decision correctly states the governing law.

The *UMC* decision outlined the policies underlying the "on sale" bar in reiterating the policy favoring prompt disclosure of inventions and precluding the inventor from commercially exploiting the exclusivity of his invention, especially when it is known that the invention will perform as intended.

In *UMC*, the Federal Circuit held that reduction to practice is not a prerequisite for an on sale bar.[1] Significantly, Judge Smith, who wrote the majority opinion in the instant case, emphasized his conviction that reduction to practice must be shown to invoke the "on sale" bar by

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[1] Without a reduction to practice, what is offered for sale cannot disclose the invention, *UMC*, 816 F.2d at 651-52, consequently the district court's finding that the invention was not disclosed in the price sheets is of no moment.

strongly dissenting in *UMC*. In the case at bar, the Federal Circuit, in an opinion written by Judge Smith, held that reduction to practice is a prerequisite to an "on sale" bar. [A-6].

Further, in his dissent in *UMC*, Judge Smith clearly recognized that conflict existed within the Federal Circuit to the "on sale" law and that confusion was an inevitable result:

> The trial judge and all parties herein proceeded, as have countless parties and judges before them, on the premise that reduction to practice is required.

That prior to the issuance of the Federal Circuit's decision in *UMC* one judge of the Court requested, but the majority rejected, *en banc* consideration of the issue is strong indication that only action by this Court will resolve the conflict. *UMC* 816 F.2d at 657, n. 11.[2]

The decision below contravenes the policy underlying the "on sale" bar and it is irreconcilable with *UMC*. The Federal Circuit has not provided uniformity and reliability to the patent law. Its conflicting decision in the instant case not only creates confusion for the public, the trial courts and the patent bar, but has the additional effect of extending the life of patent grant beyond the Congressionally mandated seventeen years.

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[2] UMC filed a Petition for Rehearing which was denied on June 29, 1987.

This Court should resolve the conflict within the Federal Circuit, the court endowed with exclusive jurisdiction over patent appeals. This Court should grant the instant Petition.

Respectfully Submitted,

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APPENDIX

In The
United States Court of Appeals
For the Federal Circuit

STATE INDUSTRIES, INC., *Appellee,* v. **MOR-FLO INDUSTRIES, INC., and AMERICAN APPLIANCE MFG. CORP.,** *Appellants.*	Appeal No. 86-1452

Note: This opinion will not be published in a printed volume because it does not add significantly to the body of law and is not of widespread legal interest. It is a public record. It is not citable as precedent. The decision will appear in tables published periodically.

DECIDED: March 3, 1987

Before MARKEY, *Chief Judge,* DAVIS and SMITH, *Circuit Judges.*

SMITH, *Circuit Judge.*

DECISION

Mor-Flo Industries, Inc., and American Appliance Mfg. Corp. appeal from the May 29, 1986, judgment of the United States District Court for the Eastern District of Tennessee holding patent No. 4,447,377 valid and infringed. We *affirm.*

OPINION

State Industries, Inc. (State), is the owner of a patent, No. 4,447,377 ('377 patent), for a method of insulating a water heater. The method involves the use of a plastic envelope to contain the liquid foam while it rises, and to prevent the foam from invading areas, such as the electrical components and the combustion chamber, that must be kept free of foam.

Mor-Flo Industries, Inc., and American Appliance Mfg. Corp. (Mor-Flo) contend here, as they did below, that the '377 patent is invalid either because a product made by the process was offered for sale more than 1 year before the application was filed, or because the method would have been obvious to one of ordinary skill in the art. Mor-Flo also argues that, even if the '377 patent is valid, its process does not infringe State's patent.

The district court rejected Mor-Flo's on-sale defense because it found that Mor-Flo had failed to carry its burden of proof on the issues whether the product offered for sale was produced by the patented process, and whether the method was reduced to practice before the critical date. The district court also held that the invention would not have been obvious to one of ordinary skill in the art and concluded that the patent was valid. It held that Mor-Flo's sleeve fell within the meaning of the term "envelope" as used in the patent, and found that Mor-Flo's process infringed State's patent directly or under the doctrine of equivalents.

Claim Interpretation

Mor-Flo argues that the district court erred in interpreting the claim at issue. Mor-Flo contends that its sleeve is not an envelope within the meaning of the claim because an envelope must have two walls and its sleeve has only one. The district court rejected this position based on the testimony of State's expert, the language of the specification of the patent, and the rules of claim interpretation.

The court disregarded the testimony of Mor-Flo's expert because he disagreed with the proposition that the limitations of narrow claims cannot be read into broader ones. The court found that this misstatement or misunderstanding of the law seriously undermined his credibility.

Claim interpretation is a question of law. *ACS Hospital Systems, Inc.* v. *Montefiore Hospital*, 732 F.2d 1572, 221 USPQ 929 (Fed.Cir. 1984). Thus, the district court's interpretation of the claim is not subject to the clearly erroneous standard of review. *Raytheon Co.* v. *Roper Corp.*, 724 F.2d 951, 220 USPQ 592 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 835 (1984).

There was no error in the district court's interpretation of the claim. The court considered the claim in light of the specification and correctly noted that the limitations of narrower claims cannot be read into broader ones. *Kalman* v. *Kimberly-Clark Corp.*, 713 F.2d 760, 218 USPQ 781 (Fed. Cir. 1983), *cert. denied*, 465 U.S. 1026 (1984), *overruled on other grounds by SRI International* v. *Matsushita Electric Corp. of America*, 775 F.2d 1107, 227 USPQ 577 (Fed. Cir. 1985); *Yarway Corp.* v. *Eur-Control USA, Inc.*, 775 F.2d 268, 227 USPQ 352 (Fed. Cir. 1985). Claims 2 and 3 limit the envelope to a double-walled structure, but claim 1 contains no such limitation.

Mor-Flo claims the district court also erred by interpreting the claim one way for validity purposes and a different way for infringement purposes. This contention is based on Mor-Flo's argument that its sleeve is not an envelope and, thus, has no merit in light of the determination that the district court properly interpreted the claim.

Obviousness

In *Graham* v. *John Deere*, 383 U.S. 1, 148 USPQ 459 (1966), the Supreme Court set out guidelines to be used in determining whether a patent would have been obvious to one of ordinary skill in the art at the time the invention was made. The findings required by *Graham* concern the

scope and content of the prior art, the differences between the prior art and the claims at issue, the level of ordinary skill in the art, and any objective evidence of nonobviousness presented. *Connell* v. *Sears, Roebuck & Co.*, 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983). Mor-Flo contends that the district court did not make these required findings. There is no doubt that Mor-Flo is correct that no finding was made on the level of skill in the art. The district court made no mention of this factor. However, we find no evidence in the record directed to this question. Mor-flo cannot complain of the failure of the court to address this issue since it did not present any evidence on a question on which it had the burden of proof. *Eaton Corp.* v. *Appliance Valves Corp.*, 790 F.2d 874, 229 USPQ 668 (Fed. Cir. 1986).

With regard to the other findings required by *Graham*, it is clear that the district court did make the necessary findings. Mor-Flo's argument concerning the lack of findings is limited to consideration of the section of the opinion labeled "Obviousness." Mor-Flo failed to consider the discussion of the prior art and the secondary considerations contained in the infringement section. There, the court went through a detailed analysis of the prior art relied on by Mor-Flo's expert to show obviousness. The court found that the Japanese patent relied on by Mor-Flo had limited applicability to the patent in suit because it did not contain a description of how the structure was put together. The court also concluded that the examiner had prior art similar to both the Japanese patent and the HUD process before him during the examination. Mor-Flo has shown no clearly erroneous findings by the district court concerning the scope and content of the prior art or the differences between the prior art and the claims at issue.

In addition, the district court considered the objective evidence of nonobviousness. The court found that there was a great need to develop foam insulated heaters and

that preventing leakage of the foam was a difficult problem faced by the industry in this development. The court also considered the testimomy regarding Mor-Flo's purchase and disassembly of State's water heater prior to developing its own foam insulated water heater to be particularly damaging. Mor-Flo has not shown any of these findings to be clearly erroneous.

Thus, the district court's conclusion of nonobviousness is supported by the required findings, and Mor-Flo has failed to show that the district court committed any error.

Infringement

Mor-Flo argues that the district court erred in its infringement analysis because it failed to consider all of the requirements of the claim and it compared Mor-Flo's device with one of the figures in the patent. Mor-Flo's arguments are without merit. The district court stated that "[t]here is no question that the defendants' process includes steps 2 through 5 of the patented claim if the plastic 'sleeve' is a plastic 'envelope'." The court then proceeded to find that Mor-Flo's sleeve was an envelope for purposes of the claim. The court did find that "[i]n fact, the sleeve and the figure 5 embodiment (partial envelope) are identical structures which are simply secured differently at the bottom of the tank." But, it was not error for the district court to consider the claims in light of the specification. Mor-Flo has failed to demonstrate any error by the district court.

Mor-Flo also argues that the district court erred in finding its method infringed State's patent under the doctrine of equivalents. It claims that, by broadening the claims in suit to cover its sleeve, the claims also read on the Japanese patent. The only testimony offered by Mor-Flo on this issue was that of its expert, whose credibility the court found to be undermined. The district court also found that the applicability of the Japanese patent was limited because it did not explain how the structure was

put together. Therefore, Mor-Flo has failed to demonstrate any error by the court in its application of the doctrine of equivalents.

Section 102(b) Defense

Mor-Flo contends that State's patent is invalid because a product produced by the patented process was on sale more than 1 year prior to the application date. Mor-Flo relies on the price lists distributed to State's customers for foam insulated water heaters and the model displayed at a trade show to prove the on-sale bar. The district court considered this evidence and concluded that it did not show that an offer was made of a product produced by the patented method because other methods of foaming heaters were known and there was no indication of how the heaters were to be produced, or how the model was made. Mor-Flo has not shown any error by the district court on this issue.

Finally, Mor-Flo argues that the district court erred in concluding the method was not reduced to practice prior to the critical date. The district court found that the heater tested by Underwriters Laboratories (UL) was not made by the patented method because it did no use an envelope. The court determined that the bag used on that heater did not envelop the tank as the patent contemplated, was not used to contain the foam, and had not demonstrated that it would work for its intended purpose. For these reasons, the court concluded that the UL heater was not a successful reduction to practice. Mor-Flo has failed to show that the district court committed error in rejecting Mor-Flo's section 102(b) defense.

In The
United States Court of Appeals
For the Federal Circuit

STATE INDUSTRIES, INC., *Appellee,*	
v.	Appeal No. 86-1452
MOR-FLO INDUSTRIES, INC., and AMERICAN APPLIANCE MFG. CORP., *Appellants.*	

Before MARKEY, *Chief Judge*, DAVIS and SMITH, *Circuit Judges*.

ORDER

A petition for rehearing having been filed in this case, UPON CONSIDERATION THEREOF, it is

ORDERED that the petition for rehearing be, and the same hereby is, denied.

The suggestion for rehearing in banc is under consideration.

FOR THE COURT

By: /S/ DIANE FRYE,
Chief Deputy Clerk
Francis X. Gindhart, Clerk

4-1-87
Date

CC: Mr. John W. Hofeldt
Mr. Paul R. Puerner

In The
United States Court of Appeals
For the Federal Circuit

STATE INDUSTRIES, INC.,
Appellee,

v.

MOR-FLO INDUSTRIES, INC., and AMERICAN APPLIANCE MFG. CORP.,
Appellants.

Appeal No. 86-1452

ORDER

A suggestion for rehearing in banc having been filed in this case,

UPON CONSIDERATION THEREOF, it is

ORDERED that the suggestion for rehearing in banc is declined.

FOR THE COURT

/S/ FRANCIS X. GINDHART,
FRANCIS X. GINDHART, Clerk

4-13-87
Date

CC: Mr. John W. Hofeldt
Mr. Paul R. Puerner

In The
United States Court of Appeals
For the Federal Circuit

STATE INDUSTRIES, INC., *Appellee,*	
v.	Appeal No. 86-1452
MOR-FLO INDUSTRIES, INC., and AMERICAN APPLIANCE MFG. CORP., *Appellants.*	

JUDGMENT

ON APPEAL from the United States District Court for the Eastern District of Tennessee

in CASE NO(S). CIV-2-84-276 and CIV-2-85-26

This CAUSE having been heard and considered, it is ORDERED and ADJUDGED:

AFFIRMED.

ENTERED BY ORDER OF THE COURT

DATED Mar 3 1987 FRANCIS X. GINDHART, Clerk

FRANCIS X. GINDHART, Clerk

ISSUED AS A MANDATE: April 14, 1987
COSTS: Against, Appellants
PRINTING ——— $248.79
TOTAL ——— $248.79

In The
United States District Court for the
Eastern District of Tennessee
Northeastern Division

STATE INDUSTRIES, INC.

v.

MOR-FLO INDUSTRIES, INC.

and

STATE INDUSTRIES, INC.

v.

AMERICAN APPLIANCE MFG. CORP.

NO. CIV-2-84-276
NO. CIV-2-85-26

MEMORANDUM AND ORDER

This is a patent infringement action in which State Industries, Inc. (State) alleges that a method claim of its

Patent No. 4,447,377, which details a method of insulating the exterior of a water heater tank, has been infringed by defendants Mor-Flo Industries, Inc. (Mor-Flo) and American Appliance Manufacturing Corporation (American). All three 43.5pc companies manufacture and sell foam insulated water heaters. This lawsuit revolves around a process used in insulating a water heater with foam. The issues presented are whether State's patent is valid and enforceable; and, if so, whether the methods used by Mor-Flo and American to insulate their gas water heaters with foam infringe the method patented by State. The Court will first examine the issue of patent validity and then the issue of patent infringement.

PATENT VALIDITY

Defendants contend that State's patent is invalid and therefore unenforceable because of State's prior public use of the patented method, 35 U.S.C. §102(b), American's prior invention of the patented method, 35 U.S.C. §102 (g), the obviousness of the patented method from the prior art, 35 U.S.C. §103, and the inequitable conduct through which the patent was obtained.

At the outset it must be noted that State was issued United States Patent No. 4,447,377 which is duly registered and on file with the Patent and Trademark Office, and that such patent is entitled to a presumption of validity in this Court, 35 U.S.C. §282. The party challenging the validity of the patent bears the burden of proof, *Id.*, and must overcome the presumption of validity by clear and convincing evidence. *Pennwalt Corp.* v. *Akzona Inc.*, 740 F.2d 1573 (Fed. Cir. 1984).

PRIOR PUBLIC USE OR ON SALE DEFENSE

With these standards in mind we turn first to the prior public use or "on sale" defense asserted by defendants. 35 U.S.C. §102 (b) provides in pertinent part:

> A person shall be entitled to a patent unless - (b) the invention was . . . in public use or on sale in

> this country, more than one year prior to the date of the application for patent in the United States
> . . . .

In order to prevail on this defense in the context of a method claim infringement case, the defendants must prove by clear and convincing evidence that more than one year prior to the patent application date the product produced by the patented process was placed on sale; and, that the patented process had been successfully reduced to practice. *D.L. Auld Co.* v. *Chroma Graphics Corp.*, 714 F.2d 1144 (Fed. Cir. 1983); *CTS Corp.* v. *Piher International Corp.*, 593 F.2d 777 (7th Cir. 1979). In other words, if State had produced a water heater by the patented method containing foam insulation and offered for sale such a water heater prior to December 10, 1978,[1] which is one year prior to the application date of the patent, "the right to a patent on the method must be declared forfeited." *D.L. Auld Co.* v. *Chroma Graphics Corp.*, *supra* at 1147.

It is unnecessary that State have actually begun production by the patented method or that State have had products produced by the patented method in stock and available for sale on the critical date. *Id.* It is enough if, assuming State had placed the water heater produced by the patented method on sale, it had simply made one water heater following every step of the claimed method prior to the critical date.

On the other hand, it would be of no consequence insofar as this defense is concerned, if State had an entire warehouse full of water heaters produced by the patented method so long as they did not offer these water heaters for sale or allow their public use prior to the critical date.

The facts in this case on these issues are not disputed

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[1]The patent application date for U. S. Patent No. 4,447,377 is December 10, 1979. The date one year prior thereto is referred to as the "critical date".

for the most part. The inferences to be drawn from the facts are, however, greatly disputed. Neither element of the defense is beyond dispute. We will initially determine whether products produced by the patented method were placed on sale prior to the critical date, and then determine whether there had been a reduction to practice of the patented method prior to the critical date.

On February 22, 1978, State distributed price lists to its customers for its Censible and Superlife water heaters with foam insulation. These price sheets were effective May 22, 1978, before the critical date. There is testimony and documentary evidence to the effect that these price lists were made in error and that the situation was rectified. Nevertheless, subsequent price list distributed in the summer of 1978, which were effective August 5, 1978, (before the critical date), also contained listings for foam insulated Censible and Superlife water heaters and perpetuated the alleged error. State argues that these price sheets were not offers to sell, and points to the disclaimer on the back of each sheet which reads, "This price sheet does not constitute an offer to sell." Although in the technical contract sense of the word, the price sheets may not have constituted on "offer", in the realistic patent law sense of the term, publication and distribution of these price sheets was certainly sufficient to constitute an offer for sale of the products described therein notwithstanding the disclaimer. There was a definite price listed for various models, and the representation was implicit in the document that these models would be available for sale on the effective date of the price sheet. Thus, the Court finds that distribution of these price sheets throughout the trade did constitute an offer for sale of the products listed thereon. However, the Court finds that the defendants have failed to carry the burden of establishing by clear and convincing evidence that this was an offer for sale of products produced by the patented method. For this reason, the Court finds no need to discuss whether the offer was effectively

rescinded by State.

The price sheets simply inform us that the Censible and Superlife water heaters offered would be foam insulated. They make no mention of the patented process in which a plastic envelope is placed between the tank and the outer jacket cover to contain the foam and prevent leakage. They do not indicate that any new method for foaming water heaters had been conceived or would be used. At the time these sheets were being distributed, State was foaming its HUD mobile home water heaters by a process which did not include the use of a containment device within the jacket of the heater, and, as counsel for defendants elicited during his cross-examination of Herbert Lindahl, State's President, there are other ways to foam water heaters which are not covered by State's patent. Thus, the simple advertising of foam insulated water heaters by State cannot be said to point to the patented process without more.

In the *Auld* case, the offer to sell was accompanied by samples of the product made by the patented method. There was, therefore, no question but that *Auld's* patent was forfeited because it placed the product produced by the patented method on sale prior to the critical date. The offer for sale in *Auld* was specifically directed to that product which the patented method would produce. No such specificity exists in the instant case and thus the defendants have failed to carry their burden with clear and convincing evidence. *See also, Barmag Barmer Maschinenfabrik Ag* v. *Murata Mach., Ltd.*, 731 F.2d 831 (Fed. Cir. 1984) (Patent invalid where offer for sale made at time of demonstration using a model which embodied every aspect of the patented product); *Shatterproof Glass Corporation* v. *Libbey-Owens Ford Co.*, 758 F.2d 613 (Fed. Cir. 1985) (Patent valid where orders solicited using samples which were not produced by the patented method).

Defendants contend that a cut-a-way model of a foam insulated water heater was displayed by State at a trade

show, and that this display model provides the specificity necessary to establish that the offer for sale was of the product produced by the patented method. From the evidence in the record however, there is no indication that this cut-a-way model was prepared by the patented method. There was no testimony that the model displayed a foam containing plastic envelope. All we know from the testimony is that the model displayed foam insulation. This model provides us with no more specificity than the price sheets themselves. It is not clear and convincing evidence that the product of the patented method was offered for sale prior to the critical date.

Similarly, the Court finds that defendants have failed to carry their burden of proof on the element of reduction to practice. To find a reduction to practice an invention "must have been 'sufficiently tested to demonstrate that it will work for its intended purpose.' " *Id.* at 623 (citation omitted). In this case the invention is a method of insulating a water heater using a plastic envelope to contain the foam insulation within the jacket cover.

In June of 1978 State produced an experimental foam insulated water heater using a "window bag" within the jacket cover. This heater was sent to Underwriter's Laboratories for testing, and received UL approval in August, 1978. Defendants assert that this heater was a successful reduction to practice, albeit by hand, of the patented method. If each step of the patented method was embodied in the production of this heater, and it demonstrated that it would work for its intended purpose, then it was a successful reduction to practice whether it was commercially viable or not.

Under cross-examination, Ernest Wenczl, State's Vice President for research and development testified that the "window bag" was an "envelope" which was "wrapped around" the tank of the hot water heater, and there is no question that the jacket was put on over the bag, a cover

was installed on top of the jacket, and foam was introduced into the bag via an opening in the cover. It would thus appear to be a successful reduction to practice. Mr. Wenczl also testified, however, that this heater was not, in his opinion, covered by the patented process. His contradictory testimony is made so by his admittance that the window bag was an envelope. It is the Court's opinion that this bag was not an envelope. The "windows" in the bag were to be placed around the electrical components to prevent their invasion by the foam. The bag was only twenty-two inches in width and thus only extended partially around the tank. Slots were cut in the bag to allow the foam to escape from the bag and, hopefully, fill in the remaining space between the jacket and the tank. This bag did not envelop the tank as the envelope in the patent contemplates. Moreover, it was not used to contain the foam within the jacket, but merely to prevent the foam from invading the electrical components and from escaping while in its initial liquid condition. Since this test heater did not actually utilize an "envelope" it did not constitute a successful reduction to practice of the method claim in State's patent. In addition, there is some testimony that this bag had not successfully demonstrated that it would work for its intended purpose.

Defendants point also to the cut-a-way model displayed at the trade show as evidence of a reduction to practice. Again, there is no evidence that this model was produced by the patented method. There is no evidence that it showed a plastic envelope wrapped around the tank containing the foam. The evidence only shows that this model contained two inches of foam insulation. It could have been prepared using the HUD method or some other method. We must presume the validity of the patent. We cannot simply surmise that a model or sample was produced by a patented method when other methods were available and were known.

Since the Court has found that the defendants have not proven by clear and convincing evidence that the product of the patented method was offered for sale or reduced to practice prior to the critical date, the plaintiff's patent is not invalid as being placed in prior public use or on sale within the meaning of 35 U.S.C. §102 (b).

PRIOR INVENTION

Defendants next claim that the State patent is invalid because the claimed method was invented by an American employee prior to the invention by State's employee. 35 U.S.C. §102 (g) provides in pertinent part:

> A person shall be entitled to a patent unless - (g) before the applicant's invention thereof the invention was made in this country by another who had not abandoned, suppressed or concealed it.

The defense of prior invention requires proof that the invention was conceived, reduced to practice and not abandoned, suppressed or concealed. *International Glass Co. v. United States*, 408 F.2d 395 (Ct. Claims 1969). An invention is deemed abandoned, suppressed or concealed "if, within a reasonable time after completion, no steps are taken to make the invention publicly known." *Id.* at 403.

In this case, we have testimony from Mr. Robert Zuck, a former American engineering employee, and Mr. Henry Moore, Vice President of Engineering for American, that in early 1978 Mr. Zuck came up with the idea of using a plastic shipping bag pulled over the tank of the water heater and doubled back up on itself inside the jacket to contain foam. They indicate that several water heaters were actually foamed using this process, and thus it was successfully reduced to practice. Both men stated that a demonstration of this process was made for Walter Abt, the company's president, in February or March of 1978; that an envelope configuration was conceived in the spring of 1978; that Kleerpak, a bag supplier, was enlisted in April of 1978 to produce some sample envelope-type bags; that

these samples were received and that a test run of twenty-five water heaters was made by using the Kleerpak envelope bags to contain foam. Beryl Weiner of Kleerpak corroborated the testimony that Kleerpak discussed a foam-containing bag with American employees, and that Kleerpak produced some number of sample envelope-type bags for American. Both Zuck and Moore testified that these envelope bags were wrapped laterally around the tank, were open at the top, and were filled with foam through the open top. It would appear from this testimony that American employees did conceive the patented method and reduce it to practice by two different embodiments by the summer of 1978, before State. There are however some circumstances which weigh against this conclusion.

Mr. Zuck admits to having spent several hours preparing for his testimony and that his recollection had been refreshed by defendants' attorneys on several points. Although both Zuck and Moore testified to performing a demonstration of foaming using the shipping bag, there was no testimony from Mr. Abt confirming this event. Zuch also recalled that Jim Starke, then vice president and general manager of American, was present at the demonstration. Mr. Starke did testify, and he did not recall ever seeing a foam containing bag used in a water heater until a State foam insulated product was purchased by American and disassembled, revealing the plastic bag used by State. Although Mr. Starke's memory for dates appeared suspect on cross-examination, it should also be born in mind that he did not meet with State's attorneys at any time to prepare his testimony. Mr. Starke testified that American, in seeking to develop a viable foam insulated water heater, was having problems containing the foam within the jacket of the heater, and that this prompted the purchase and tear down of the State heater.

Edward Taylor, Vice President of Engineering for Mor-Flo, testified that he first received information on a foam-

containing bag from American in late 1980 or early 1981; that in early 1980 Mor-Flo purchased an electric, foam insulated, State water heater which was tested and torn down; and that Mor-Flo first began production using its "sleeve" to contain foam in mid-1981.

Two letters from Mr. Abt provide additional evidence pointing to the lack of development of a successful or satisfactory foam insulating procedure by American/Mor-Flo prior to 1980. In May 1979 Mr. Abt wrote James Bridegum of American, memorializing several manufacturing matters discussed "at the annual shareholders meeting." Item six in the letter states:

> 6. We stressed the need for developing a full line of foamed water heaters in order to cut down the tremendous freight cost of shipping energy saver with fiberglass insulation. There is a paramount and definite need for acceleration of this program.

In July 1979 Mr. Abt wrote Jack Moore of American and Bob Montgomery of Mor-Flo in regard to development of a manufacturing process for foam insulated heaters. Mr. Abt stated,

> From what I am hearing in the field, our competitors are ahead of us in the manufacturing of heaters with foam. I expect to receive from you on Monday of each week our progam on developing a final manufacturing process to produce our water heaters with foam.

If American employees had successfully developed two methods of foam containment using plastic bags in early 1978, it seems odd that they would not have shared this information with their counterpart at Mor-Flo, Mr. Taylor, and that Mr. Abt would express such concern over the development of a foam insulating manufacturing process. Also weighing heavily against the testimony of Zuck and Moore is the basically "unexplained absence of the kind of evidence we would normally expect to see in a case of this kind, *viz*, [American]'s records of the development,

testing and production of the device [American] alleged it had reduced to practice." *CTS Corp.* v. *Piher International Corp.*, *supra*, at 780.

Defendants produced four quarterly engineering reports prepared by Moore in 1978 which make reference to development of foam insulated heaters. The report for the first quarter indicates that American foamed five experimental heaters, but does not indicate how. It is also noted that engineering was "awaiting sample plastic bags used in foaming. Expect sample by May 1, 1978." In the second quarterly report it is noted that the sample was received and that a test run on twenty-five electric heaters would be made on July 20, 1978. That is the last we hear about plastic bags, as far as documentary evidence is concerned, until the "Outline of Engineering Goals for 1981." The final two quarterly reports for 1978 refer to foaming attempts by the CPR division of Upjohn and mention leakage problems and the experimentation of various sealing methods. The outline of engineering goals for 1981, prepared by Mr. Moore, lists as item or goal six: *"Foaming-Gas Water Heaters* - Sample plastic bags were to arrive by Jan. 5th. Samples are now to be delivered Feb. 1st. Production line is being prepared for foaming." The indication is that prior to 1981 American had not successfully developed a procedure for foam containment, at least in their gas heaters.[2]

American has no drawings or records prior to 1981 which display or refer to foam containment by plastic bags. Zuck testified that sample heaters using plastic bags were sent to UL and AGA[3] for testing in 1978 and that a description and drawings of the heater would have been sent with the samples. No correspondence between American and

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[2] American/Mor-Flo do not use plastic sleeves or bags to contain foam in their electric heaters.

[3] Underwriter's Laboratories and American Gas Association.

UL or AGA was produced. No such drawings or descriptions of the water heaters were produced. No records from either UL or AGA were produced.

By way of contrast, and, as would be expected, the record is replete with examples of drawings and descriptions of various bags and heaters conceived by State employees in the process of developing the patented method. The lack of documentary evidence and the inconsistencies between the testimony of the two American engineering employees and Abt, Starke and Taylor militate against a finding that defendants have carried their burden of proof on the issue of prior invention.

Even if American employees had conceived and reduced to practice the invention claimed by State, the Court finds that this prior invention was abandoned, suppressed or concealed.

Although Zuck and Moore claim to have made a demonstration for Walter Abt, Mr. Abt did not confirm this, and there is no evidence that they or anyone else took any step to make the invention publicly known. No patent application was filed. The invention was not described in any document, much less a publicly disseminated document. The invention was not demonstrated publicly. It was not even shared with American's parent corporation, Mor-Flo. Apparently the idea was abandoned or shelved by American engineers until 1981 when the "sleeve" method was developed. "Their work lay dormant, did not enrich the art, and thus 'remained secret, effectively concealed and suppressed until exhumed by . . . [defendant] for the defense of this case.' " *International Glass Co.* v. *U.S.*, *supra*, at 403 (citation omitted). Based upon these facts the Court concludes that even if American employees did invent the claimed method prior to State, this invention was abandoned, suppressed or concealed, and thus, the defense of prior invention must fail.

OBVIOUSNESS

Defendants claim that State's patented method for insulating a water heater is invalid as obvious in view of the prior art. 35 U.S.C. §103 provides that:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in Section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Defendants' expert, Mr. George Thomas, testified that the patented claim would have been obvious from the prior art. Mr. Thomas relied upon the HUD process of foaming without an envelope or bag, and a Japanese patent which does show a bag for containment of foam insulation on a thermos-type product, for his opinion that the method claimed was obvious. The implication was that the patent examiner did not have these prior art references before him during his examination of State's application. However, as was pointed out during Mr. Thomas' cross examination, the Japanese patent was from a class, subclass which the patent examiner searched in connection with his examination of the application. And, even though the HUD process itself may not have been before the examiner, there were several other prior art references made by the examiner, at least two of which were to water heaters, which disclosed the use of foam insulation in a cavity without a bag. Mr. Thomas admitted that the examiner knew about foaming water heaters without a bag for containment, like the HUD process, and that he had the Japanese patent before him during his search. Thus, the examiner knew about the prior art relied upon by Mr. Thomas as demonstrating obviousness, yet he did not find the method obvious, and did not even cite the Japanese patent. In addition, the examiner did cite other patents similar to the Japanese

patent and thus was well aware of the concept embodied there. The patent examiner is an expert in this field and that is why patents come into Court with a presumption of validity which can only be overcome by clear and convincing evidence. The patent examiner reviewed the prior art and determined that the patent should be allowed. His opinion is entitled to great weight in the absence of proof that pertinent prior art or other evidence was not considered during his examination. *See, American Hoist & Derrick Co.* v. *Sowa & Sons*, 725 F.2d 1350, 1359 (Fed. Cir. 1984).

The invention here in dispute is simple and there is an inclination to find such simple things to be obvious. However, if the invention were so obvious why hadn't anyone come up with it, and why were both State and American struggling to come up with some method to prevent foam leakage and invasion of areas such as the combustion chamber of a gas heater? Both sides admit that there was a great need to develop foam insulated heaters in the late 1970's. The patented method solved these problems, and was apparently the first to do so in the water heater industry.

Based upon the opinion of the patent examiner and the circumstances surrounding this invention in the industry, the Court finds that the patent in suit was not obvious within the meaning of 35 U.S.C. §103.

INEQUITABLE CONDUCT

Finally, defendants contend that State's patent is unenforceable because of the inequitable conduct of State's attorney before the Patent and Trademark Office (PTO). The allegedly inequitable conduct was the failure of State's counsel, Mr. Peurner, to disclose the HUD foaming process, the circulation of the price sheets, the existence of the UL test heater with the window bag, and the cut-a-way model displayed at the trade show.

Rule 56 of the PTO, 37 C.F.R. 1.56, imposes "a duty of candor and good faith . . .on the inventor, on each attorney or agent who prepared or prosecutes the application and on every other individual who is substantially involved in the preparation or prosecution of the application. . . ." Each such individual must disclose to the PTO information they are aware of which is material to the examination of the application. *Id.* Information is deemed "material where there is a substantial likelihood that a reasonable examiner would consider it important in deciding whether to allow the application to issue as a patent." *Id.*

Defendants' expert testified that, in his opinion, the duty of candor and good faith was breached by the failure to disclose the HUD process. As was discussed earlier, the patent examiner did consider prior art references to foam insulated water heaters like the HUD; and, the HUD method is implicitly discussed within the patent itself. In column 4 line 38 of the patent it states, "Without the envelope, elaborate means of sealing would have to be used at points where the vertical outer casing joins the base of the outer casing. . . ."

Defendants also contend that the failure to disclose the UL test heater, the cut-a-way display model and the circulation of price sheets was a material omission. Since we have no evidence that the price sheets were directed towards the patented method, or that the cut-a-way model was produced by the patented method, the Court cannot say that these were matters of material information which should have been presented to the PTO. As to the UL heater, since the bag used therein was not an "envelope" and therefore not covered by the patent, and since the idea was not successful in terms of producing acceptable foam insulated heaters, and since the heater was not placed in public use, its disclosure would have served no purpose. Accordingly, the Court finds that defendants have failed to prove by clear and convincing evidence that the inventor

or patent counsel failed to fulfill the duty of candor and good faith.

The wiser course would be to include information such as the HUD process and the UL test heater in patent applications. However, "simple negligence, oversight or an erroneous judgment made in good faith is insufficient" to constitute inequitable conduct. *J.P. Stevens & Co., Inc.* v. *Lex Tex Ltd. Inc.*, 747 F.2d 1553, 1560 (Fed. Cir. 1984). There is no indication that anything else was the case in this action.

Having thus concluded that the defendants are unable to overcome the presumption of validity with clear and convincing evidence the Court finds United States Patent No. 4,447,377 to be valid and enforceable. We must next turn to the issue of infringement.

INFRINGEMENT

It is the method of claim 1 of the patent which State alleges American and Mor-Flo are infringing. claim 1 states as follows:

I claim:

1. The method of insulating a tank comprising the steps of:
(1) wrapping a plastic envelope around the exterior side wall of the tank;
(2) installing an outer jacket member around the tank and over the envelope, said jacket member dimensioned so that there will be a space between the tank side wall and the jacket member in which said envelope is positioned;
(3) installing a cover member on the top of the jacket member to close off the top of the jacket;
(4) introducing a foam-type insulation material into the envelope through an opening in the cover member, said material when introduced being in the form of a mixture of fluid components which will expand in the envelope and when set will produce a rigid wall of insulating material in the space between the tank wall and the jacket

means; and
(5) plugging the opening in the cover member through which the foam-type insulation material is introduced.

The principal dispute revolves around the first step of the patented method. Defendants claim that they do not use an "envelope", and that the "sleeve" which they use is not "wrapped" around the tank.

In the American/Mor-Flo method, a cylindrical piece of plastic is pulled over the top of the tank. Fiberglass has been positioned around the combustion chamber at the bottom of the tank. The "sleeve" is taped at the bottom approximately two inches below the top of the fiberglass which surrounds the combustion chamber. The jacket is then installed over the tank and sleeve leaving a space between the jacket and tank. The top is installed and foam is shot into the sleeve through an opening in the top. The foam is in a liquid state when shot in. It comes in contact with the fiberglass, plastic and tank wall at the bottom of the sleeve and is thereby prevented from escaping at the bottom while it expands.

Plaintiffs' expert, Mr. Luedeka, testified that in his opinion, based upon on-site observations of the processes and study of the patent, the file history and the references cited by the examiner, defendants' process infringed State's patent, claim 1, literally and/or by the doctrine of equivalents. There is no question that the defendants' process includes steps 2 through 5 of the patented claim if the plastic "sleeve" is a plastic "envelope". Mr. Luedeka testified that defendants' sleeve was an envelope within the meaning of the patent because it envelops the tank of the water heater just like State's double-walled envelope, and be-

cause claim 1 of the patent is not limited to double-walled envelopes as are claims 2 and 3.[4]

The patent does contain a drawing and description of a "partial envelope" which is basically a single-walled structure. *See*, Figure 5 and the description thereof in column 4, lines 4-27 of the Patent attached. Reference to this embodiment as a "partial envelope" seems to indicate that an envelope, as the term is used in the patent, refers to a structure which is double-walled and is used to envelop the foam insulation rather than the tank. However, the description goes on to state that "it will be appreciated that in the FIG. 5 embodiment the side wall of [the] tank 76 serves as one wall of the space into which the foam insulation material is injected." Patent, Column 4, Lines 24-27. If the envelope was to envelop the foam, the description would have stated that the side wall of the tank served as the inner wall of the envelope rather than as "one wall of the space" into which the foam is shot. In addition, although the structure is initially referred to as "the partial envelope 78," it is subsequently referenced as "envelope 78." These portions of the description seem to dispel any notions that the term "envelope" in the patent refers only to a double-walled structure that envelops the foam. It appears to the Court that Mr. Luedeka's interpretation is correct in that the envelope envelops the tank, and must not necessarily involve a double-walled structure.

Defendants' expert, Mr. Thomas, testified that in his opinion, the term "envelope", as used in the patent, can refer only to a double-walled structure even though claim 1 does not contain the limitation found in claims 2 and 3: "said envelope having an inner and an outer wall." Patent, Column 5, Line 3. The only limitation on the envelope in claim 1 is that it be plastic. It is not specified to have

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[4]This limitation in claims 2 and 3 is the reason the American/Mor-Flo process is not alleged to infringe those claims.

both an inner and an outer wall, and thus, as Mr. Thomas admitted on cross-examination, claim 1 is broader in scope on its face than claims 2 and 3. However, Mr. Thomas was of the opinion that claim 1 was limited to a double-walled envelope because the attorney prosecuting the patent had described it as "quite similar in scope to allowed claim [2]", and because of certain language in the description section of the patent which he claimed indicated that only wrap-around envelopes with both an inner and an outer wall are contemplated by the patent. Analysis of the language of the patent will continue hereafter, however, we must briefly address the allegedly limiting description by State's patent attorney that claim 1 is similar in scope to claim 2, and the proposition that the limitations of claims 2 and 3 can be read into claim 1.

It is first noted that "similar" in scope does not mean "identical" in scope. The absence of the double-wall limitation on the term "envelope" in claim 1 is obvious. Claim 1 is similar in scope to claims 2 and 3 in that it is basically the same process described in 2 and 3, but it is broader, or less specific, so as to allow minor variation. The statement made by State's patent attorney cannot form the basis for imposing a double-wall limitation on claim 1.

As to the proposition that limitations from narrow claims may be read into broader claims, the Court notes that such was soundly rejected by the Federal Circuit Court of Appeals in *Kalman* v. *Kimberly-Clark Corp.*, 713 F.2d 760 (Fed. Cir. 1983). In *Kalman*, the Court stated that "it is settled and proper law that 'Where some claims are broad and others narrow, the narrow claim limitations cannot be read into the broad whether to avoid invalidity or to escape infringement.'" *Id.* at 770 (quoting *Deere & Co.* v. *International Harvester Co.*, 658 F.2d 1137, 1141 (7th Cir. 1981). Mr. Thomas stated that he disagreed with this statement of the law and asserted that the "*Bremerton*" case would support his position. *Builder's Concrete Inc.* v. *Bre-*

merton Concrete Products Co., 757 F2d 255 (Fed. Cir. 1985) contains no such contrary position on the doctrine of claim differentiation. As a matter of fact, the rule announced in *Kalman* was cited and followed in a later case by the same court. *Yarway Corp.* v. *Eur-Control USA, Inc.*, 775 F.2d 268 (Fed. Cir. 1985). The Court finds this misstatement or misunderstanding of the law by defendants' expert to seriously undermine his credibility.

The Court finds that the plastic sleeve used by defendants is covered by the term "envelope" as used in the patent. In fact, the sleeve and the figure 5 embodiment (partial envelope) are identical structures which are simply secured differently at the bottom of the tank. The sleeve used by defendants is pulled over the tank and taped at the bottom over the fiberglass. The partial envelope of figure 5, also a cylindrical "sleeve", is pulled over the tank all the way to the bottom, where it is taped to the tank, or secured "by any suitable means such as a retainer strap member." Patent, Column 4, Line 12. The plastic cylinder is then turned back up on itself and brought back to the top of the tank. After the jacket is put on, the plastic is lipped over the jacket and captured between the outer jacket and the cover when it is placed on top of the jacket. When the foam is injected it is caught in the upturned plastic, and as it rises, is contained by the tank wall on the inside and the plastic on the outside. The defendants' plastic cylinder is simply not turned under at the bottom to catch the foam. Defendants rely upon the tape and the small section of fiberglass within the tape to retain the foam at the bottom, and contend that this distinction is sufficient to take their method out of the scope of claim 1.

Defendants contend that their sleeve is not an envelope within the meaning of the patent because every description in the patent of an envelope includes a "bottom wall" to catch the foam. But defendants overlook the fact that when their sleeve is taped over the fiberglass

and cinched to the tank, they also have formed a bottom wall within their sleeve. Defendants emphasize that it is the exposed fiberglass, and not the plastic and tape, which retains the foam at the bottom. But were the sleeve not taped over the fiberglass, the foam would not be retained at the tank base, for although the fiberglass helps prevent any leakage from the bottom of the sleeve, it is the taped off sleeve which retains the foam.

As discussed above, both plastic cylinders, the figure 5 embodiment and the defendants' sleeve, envelop the tank. Whether the cylinder is turned under at the bottom or taped over a small portion of the fiberglass seems of no consequence. The claim does not speak to the manner in which the envelope is secured at the base of the tank. Even if it was a cognizable departure from the claim it would only be a distinction that did not make a difference under the doctrine of equivalents.

Application of the doctrine of equivalents is appropriate when the allegedly infringing process " ' performs substantially the same function in substantially the same way to obtain the same result.' " *Graver Tank Co.* v. *Linde Air Products Co.*, 339 U.S. 605, 608 (1950) (quoting *Sanitary Refrigerator Co.* v. *Winters*, 280 U.S. 30, 42 (1929). In other words, the doctrine of equivalents will apply "when the alleged infringer seeks to appropriate the invention with minor modification to avoid the literal language of the claims." *Carmen Industries Ind.* v. *Wahl*, 724 F.2d 932, 942 (1983). Such would seem to be the case in regard to the distinction in the manner of securing the plastic at the base of the tank.

Defendants correctly assert that the doctrine of equivalents may be limited by the prior art. *Carmen Industries* v. *Wahl*, 724 F.2d 932 (Fed. Cir. 1983). But they incorrectly assert that the prior art of the HUD process would preclude coverage of their "sleeve" within the scope of the term "envelope." Defendants argue that the jacket in the HUD pro-

cess is an "envelope" since it also envelops the tank; that the sleeve is identical to the jacket except that it is flexible (both are tubes pulled over the tank); and that the sleeve is therefore covered by prior art over which the doctrine of equivalents cannot extend. In a sense, the jacket is an inflexible envelope, but the differentiation between the HUD method and the patented method is that there is both an envelope *and* a jacket in the patented method. Likewise, in the defendants' method there is both the inner enveloping "sleeve" and the outer enveloping jacket. In addition, the jacket in the HUD process does not contain the foam around the tank and within the jacket as do the plastic envelopes of plaintiff and defendants because the jacket is nowhere adhered to the tank. Thus, the defendants' "sleeve" is not excluded from the scope of the term "envelope" by reference to the prior art.

Having determined that defendants' sleeve is an "envelope" we must next turn to the issue of whether the defendants "wrap" their envelope around the tank within the meaning of the claim. Webster defines "wrap" as "to cover, envelop or enclose." *See*, Webster's Third New International Dictionary, p. 2638, (G. & C. Merriam Co. 1961). Thus, if the tank is enveloped by the envelope or sleeve there would seem little question but that the envelope or sleeve is wrapped around the tank. Since both of the pull-over structures, defendants' sleeve and the figure 5 embodiment, envelop the tank, both can be said to wrap the tank. In addition, a diagram from American's files of a cylindrical envelope which would have to be pulled over the tank contains the description "closed bottom plastic bag *wrapped around the tank.*" Exhibit 27.

If the claim was rephrased to read: (1) Wrapping the exterior side wall of the tank with a plastic envelope," our discussion could end here. However, the claim also contains the term "around"--wrapping a plastic envelope *around* the exterior side wall of the tank. In common usage

the term "wrapping around" would appear more directed towards the process by which State's double-wall envelope with each end sealed, (shown in figures 2 and 3 in the patent and the embodiment actually used by State) is positioned on the tank rather than the process by which the cylindrical envelopes are positioned on the tank. This is in keeping with the first definition of "around" listed by Webster: "in a circle or in circumference." *See*, Webster's Third New International Dictionary, p. 120, *supra*. The cylindrical envelopes are more specifically described as being pulled *over* the tank. However, the cylindrical envelopes could also be described as being positioned *around* the tank. The second definition listed by Webster for "around" is: "enclose from all sides so as to surround, confine or envelop." *Id.* Certainly when the cylindrical envelopes are attached to the base of the tank, and thus surround, confine or envelop the tank, they can be said to be *around* the tank. Thus, from a purely definitional point of view, the process by which the cylindrical envelopes are positioned on the tank comes within the meaning of the term "wrapping around."

More importantly, the patent itself displays two embodiments, figures 4 and 5, in which cylindrical envelopes are used which must be pulled over the top of the tank. Since such a procedure comes within the dictionary definition of the phrase "wrapping a plastic envelop around the exterior side wall of the tank," we must assume that it was intended to come within the patent's definition of this phrase. In describing the figure 4 embodiment the patent states that "the envelope 56 used therein is of a somewhat different shape than the previously described wrap-around envelopes 18 and 46." Apparently the inventor knew the difference between wrap-around and pull-over envelopes yet realized that step 1 of claim 1 would cover both. Step 1 does not say, "positioning a wrap-around envelope on the exterior side wall of the tank," it says, "wrapping a plastic envelope around . . . ." The process is not limited to

wrap-around envelopes, and the diagrams and descriptions reveal this. Therefore, the Court finds that the defendants' process is covered by the language and meaning of step 1 in the claim.

Having determined that defendants' process is covered by step 1 in the claim, the Court finds that defendants literally infringe claim 1 of the patent in suit by their process of insulating gas water heaters with foam using a plastic "sleeve" for foam containment as practiced at the facilities in Johnson City, Tennessee, and Santa Monica, California.

In addition, the Court finds that even if the defendants' process were determined to be outside the literal coverage of claim 1, the process must be deemed as an infringement under the doctrine of equivalents which was mentioned earlier. Here again, the dispute would center around step 1 because there is no question that once the plastic is on the tank, State, Mor-Flo and American each follow the same subsequent steps. The question then would be whether pulling a plastic sleeve over the tank and cinching it around the bottom over a small portion of fiberglass is the equivalent of wrapping a plastic envelope around the tank. It is the opinion of this Court that this question must be answered in the affirmative.

Defendants' expert, Mr. Thomas, testified that the patented claim could not be extended to cover the American/Mor-Flo process because of the prior art. Mr. Thomas testified that on one hand you have the HUD method using foam with no envelope, and on the other hand you have the Japanese patent, previously referred to, which apparently discloses a sleeve structure in its figure 3; and, that therefore, the patent, if valid at all, would be limited to what is disclosed in figures 1, 2, and 3 of the patent in suit, which is a double-walled envelope that is wrapped laterally around the tank.

There is no question but that the patent in suit cannot

be expanded to include foaming within the jacket with no envelope, but that is not what the defendants are doing. As to the Japanese patent, it is the opinion of the Court that this foreign patent does not so limit the application of the doctrine of equivalents in this case as to preclude coverage of defendants' process. The "sleeve" structure in figure 3 of the Japanese patent actually appears to be two separate sheets of plastic, one lining each side of the outer vessel. On the other hand, it may well be a cylindrical structure, but nowhere in the patent is it sealed off or cinched to the inner vessel or tank. Either way, there is no envelopment of the inner vessel as in defendants' process. In addition, there is no description of how the structure is assembled, and this would appear to severely limit its applicability to the patent in suit which only involves a method. Finally, as plaintiff points out, this Japanese patent is only a "paper patent" so far as we know, and thus is entitled to less deference than one that has been successfully practiced. *Bela Seating Co.* v. *Poloron Products, Inc.*, 297 F. Supp. 489 (N. Dist. Ill. 1968).

The Court finds these considerations to severely limit the authority of Mr. Thomas' testimony on this issue. On the other side, Mr. Leudeka, plaintiff's expert, testified that defendants' process would infringe claim 1 of plaintiff's patent by application of the doctrine of equivalents, and the Court so holds.

Quite apart from the expert testimony and reasoning set forth above on the issue of infringement, the Court finds the testimony regarding the purchase and disassembly of a State foam-insulated water heater by both Mor-Flo in Johnson City and American in California, prior to their apparent conception and initiation of production using the "sleeve" method, to be particularly damaging. After observation of State's envelope, the defendants came up with a strikingly similar foam-containing configuration, and solved a problem which Walter Abt had made a top

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Superlife Mark–V

5 Year Limited Warranty

Model Number	Gal. Cap.	Diameter (In Inches)	Height Less Hood (In Inches)	Height Incl. Hood (In Inches)	Recovery 100° Rise Nat.	Recovery 100° Rise Prop.	BTU Input Nat. & Prop.	Shipping Weight	List Price	Distributc Price
SV-30-NRT8	30	18	57	60	27.3	27.3	32,500	145	$217.78	$ 98.0(
SV-40-NRT8	40	18	58	61	33.6	33.6	40,000	170	241.11	108.5(
SV-50-NRT8	50	20	58¼	61¼	33.6	33.6	40,000	195	303.33	136.5(

These prices are not subject to any further discounts.

ALL MARK V GAS WATER HEATERS
are furnished with the following equipment:

1. Five year limited warranty on total heater including parts.
2. ASME rated temperature and pressure relief valve.
3. Solid brass, long shank, boiler drain.
4. Plastisert nipples.
5. V–TRanode – In addition to standard anode, a second time release anode is furnished for additional protection against corrosion.
6. MODIKUM – State's new high density, high efficiency insulation.

The Superlife meets the stringent efficiency performance criteria for energy consuming appliances set forth by H.U.D., ASHRAE STANDARD 90-75 and BOCA CODE.

PLAINTIFF'S EXHIBIT NO. 92-17

5 YEAR LIMITED WARRANTY

If during the first 5 years after the date of the original installation the tank or any component parts shall be shown to Company's satisfaction to have developed a leak due to faulty materials or workmanship in manufacture, the Company will provide to the original consumer or Company authorized transferee a replacement heater of comparable capacity and type.

IMPORTANT

State's Superlife Heaters now are manufactured with 2" of FOAMED INSULATION. State Foam Insulation means a more rigid heater—a more solid heater (Hit the jacket with your hand; it's as solid as a refrigerator cabinet.) What's even more important is the significant increase in "R" factor that 2" of Foam Insulation gives. The Superlife heater, with 2" of State's EXCLUSIVE FOAM INSULATION . . . . . epitomizing ENERGY EFFICIENCY!

STATE INDUSTRIES, INC.
Ashland City, Tennessee 37015
Henderson, Nevada 89015

Order by this code: SUV-8/78G-2

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Residential Gas

Automatic Glasslined Residential Water Heaters



Northeastern Sales Region
Sheet No. 445-2
Sheet Dated May 5, 1978
Effective Billing August 5, 1978

state INDUSTRIES, INC.

ENERGY EFFICIENT

Censible

5 Year Limited Warranty

Model Number	Gal. Cap.	Diameter (In Inches)	Height Less Hood (In Inches)	Height Incl. Hood (In Inches)	Recovery 100° Rise G. P. H.	BTU Input Per Hour	Shipping Weight	List Price	Distributor Price
PV-30-NRT8	30	16	56	59	27.3	32,500	145	$ 201.11	90.50
PV-40-NRT8	40	17	58	61¼	33.6	40,000	165	222.22	100.00
PV-50-NRT8	50	20	58¾	61¾	33.6	40,000	190	280.00	126.00
PV-65-NRT8	65	22	59½	62¾	38.6	46,000	220	495.55	223.00
PV-75-NRT8	75	24	60	63¾	50.4	60,000	255	555.55	250.00
PV-100-NRT8	100	26	69¼	72	63.1	75;100	430	854.44	384.50
SHORT									
PV-40-NRS7	40	22	47½	50¾	29.4	35,000	170	222.22	100.00

These prices are not subject to any further discounts.

ALL CENSIBLE GAS WATER HEATERS are furnished with plastisert nipples and State's new high density, high efficiency insulation.

Substitute "P" for "N" when ordering Propane Gas (EXAMPLE: PV-30-PRT8.)

Add $6.11 to the list price to include factory installed American Society of Mechanical Engineers (ASME) and National Board of Boiler and Pressure Vessel Inspectors approved temperature and pressure relief valve.

Add $4.44 to the list price for Massachusetts code.

Add $10.00 to list price for hand-hole clean-out. (Contact factory or sales representative for availability.)

The Censible meets the stringent efficiency performance criteria for energy consuming appliances set forth by H.U.D., ASHRAE STANDARD 90-75 and BOCA CODE.

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5 YEAR LIMITED WARRANTY

If during the first 5 years after the date of the original installation the tank or any component parts shall be shown to Company's satisfaction to have developed a leak due to faulty materials or workmanship in manufacture, the Company will provide to the original consumer or Company authorized transferee a replacement heater of comparable capacity and type.

IMPORTANT

Less is More! Ludwig Mies vander Rohn said it and its pertinent to State's New Censible® Heaters. You'll note that these Censible heaters are 2" less in diameter than our previous models. The reason is ..... State's EXCLUSIVE FOAM INSULATION. Foam insulation means a more compact heater, a more rigid heater—a more solid heater (hit the jacket with your hand, its as solid as a refrigerator cabinet) with no loss in "R" factor. Yes, 1" of foam is equal to 2" of 2 inch, 2 pound density fiberglass water heater insulation. State, the Leader ..... First, again, with FOAM INSULATION!

STATE INDUSTRIES, INC.
Ashland City, Tennessee 37015
Henderson, Nevada 89015

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0716

C0114

THIS PAGE WAS TO BE XEROXED!!

THE COURT: That's an offer to sell.

MR. PRUERNER: The price sheets, your Honor, did not define the Claim of the patent.

THE COURT: Well, it does to those whoe know how to read it, if it's got 8, it's foam, 7, it's fiberglass.

MR. PUERNER: There could be foam, and foam. We're talking about a particular method for making a foam water heater.

THE COURT: You mean your company was putting out a price sheet that the customers couldn't identify as to what the product was?

MR. PUERNER: Frankly, your Honor, the customer didn't care how it was made, but the fact in this case is, before you are held accountable, you have to do something that ties into the patent process. Now, true, customers- -

THE COURT: What other type of foam water heaters did you have, other than the ones involved here?

MR. PUERNER: We didn't have any other than the HUD water heaters that didn't use the envelope. That's the key to it. At the time these sheets were sent out, unfortunately, somebody jumped the gun, and it was a mistake, and it was corrected, and- -

THE COURT: It was an offer to sell something, wasn't it?